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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/646,072	08/22/2003	Heinrich Roder	021607.0101USPT	8444

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EXAMINER

VANORE, DAVID A

ART UNIT PAPER NUMBER

2881

DATE MAILED: 04/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/646,072

Applicant(s)

RODER, HEINRICH

Examiner

David A. Vanore

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 April 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-68 is/are pending in the application.
- 4a) Of the above claim(s) 1-32, 34, 36-40, 42 and 44-68 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 33, 35, 41 and 43 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6/04, 9/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of claims 10-16, 23, 35-48, and 57-68 in the reply filed on April 4, 2005 is acknowledged.

Claims 1-32, 34, 36-40, 42, and 44-68 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on April 4, 2005.

In the reply, the Applicant has indicated that claims 10-16, 23, 35-48, and 57-68 read on Species VI, which corresponds to the species indicated in Fig. 18.

Claims 10-15, 61-62, and 67 are withdrawn because they read on a different species. Specifically, Claims 10-15 and 62 read on Species VII, the species indicated in Fig. 16 because they recite features of Species VII, not Species VI. Claims 61 and 67 are withdrawn as being drawn to a non-elected species. Claims 61 and 67 are similar to claim 13 where it is disclosed that a generated ruleset is used to optimize filters. The generation of ruleset step is a feature of Species VII as indicated in Fig. 16.

Claim 23 is withdrawn because there is no transformation and display step associated with Species VI, as illustrated in Fig. 18. Claim 23 is therefore drawn to a non-elected species.

Claims 36-39, 44-47, and 58-60 are withdrawn because they are drawn to the species indicated in Fig. 12, Species IV.

Claims 16, 40, 48, 63-66, and 68 are withdrawn because they are drawn to the species indicated in Fig. 11, Species III.

Claim 57 is withdrawn because it is drawn to the species indicated in Fig. 10, Species II.

Claims 33, 35, 41 and 43 are the remaining claims which are drawn to the elected species illustrated in Fig. 18, Species VI, and will be treated in the instant Office action.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 33, 35, 41, and 43 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Yates, III et al. (USPN 6,017,693 A).

Claim 41 recites a system for processing mass spectrometry data comprising a storage unit and a processing unit in communication with the storage unit and configured to articulate the method recited in claim 33. Therefore, claims 33 and 41 will be treated simultaneously below.

Yates, III et al. teaches a system and method for processing mass spectrometry data utilizing a computing means (Col. 4 Lines 30-34) having a processing means and a storage unit which are in communication with one another (Note Example 1 at Col. 11 Lines 14-32).

The storage unit receives raw data from the mass spectrometer and stores transformed data where the transformed data has a hierarchical data format. In the context of Yates, III et al., the definition of hierarchical must be taken into account. As defined, the term hierarchical relates to the term hierarchy which implies having a graded or ranked organization. In the instant case, the raw spectral data is appended to indicate the presence or lack of presence of certain peptides. This substantially coincides with the "grading" of elements in the mass spectrometer data. Such an operation transforms the raw data to a graded dataset where certain features of each sequence in the dataset are indicated on each said sequence. Note Col. 11 Lines 1-13 and Fig. 6A where the steps of receiving raw data and sorting said raw data to impart a structure to the raw data are illustrated. Fig. 6A is an illustration of the "transformation" of raw data in Yates, III et al. into a transformed data. This transformed data is saved onto a storage medium, note Col. 9 Lines 42-49. Regarding the limitation where the transformed data having a hierarchical data format for use at multiple resolutions, Yates

III, et al. teaches that the data is appended to indicate the presence of certain peptides, and further parses the data into 2 groups where the first group consists of the 200 most intense ions and the second group comprising the remaining ions. The second group is divided into 10 mass regions, where the maximum intensity is normalized within each region. Resolution is taken in the context of this application to mean the fineness of detail that can be distinguished of a given characteristic of a set of data. In the instant application and prior art, Yates, III et al. teaches the division of the data based on the intensity over different mass regions. Therefore, each different mass region data group provides a different resolution of the detected mass spectral data and the data format thus created by the method and apparatus of Yates, III et al. is useable at multiple resolutions.

The processing unit of the computing means of Yates, III et al. carries out the actions above automatically (Col. 4 Lines 30-34) and is further configured to articulate the following method steps:

- 1) The receiving of a request to perform an operation utilizing at least a portion of the transformed data is taught in Yates, III et al. After the data transformation described above, Yates, III et al. teaches that a search operation is performed on the transformed data as illustrated in Fig. 6B and described at Col. 9-10 in the disclosure of Yates, III et al. The computer processor must respond to a request to carry out such an operation, whether the source is a human operator prompting the operation or whether

by code internal to the processing means in the form of hardware(firmware) or software. The fact that an operation is carried out carries with it the implicit reception of a request to perform the operation.

2) The accessing of transformed data corresponds to the processor accessing the storage unit and loading the transformed data of above. Note Col. 9 Lines 50-54 where Yates, III et al. teaches that the previously discussed transformed data is loaded. The loading corresponds not only to the accessing of the transformed data, but also to the production of the transformed data because in a computer, a processor must first access a data storage means, locate, and then retrieve the desired data by cause the storage means to output the data to the processing means.

3) The selection of parameters to use for a selected resolution of the transformed data. In Fig. 6B, step 636 requires the loading of search parameters. The use of such parameters and the fact that they are used to define the limits of the search operation implicitly mean that they are selected. Without first being selected, the parameters cannot be used.

4) The production of a transformed data set at the selected resolution as a function of the selected parameters. As pointed out above, the loading step corresponds to the accessing and production of data from a transformed dataset.

5) The performance of the requested operation of the transformed dataset at the selected resolution to generate a result for the operation in response to receiving the request. In the instant case, Yates, III et al. teaches that the selected operation is a search operation carried out in accordance with the details of Fig. 6C using the

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previously indicated transformed data and in accordance the previously established search parameters (Col. 9 Line 50 through Col. 10 Line 44).

Regarding claims 35 and 43, said claims recite that the operation includes searching for transformed data having certain properties. As previously pointed out, Yates, III et al. transforms raw data into transformed data and subsequently searches said transformed data for elements of said data in accordance with search parameters, note again Item 636. These parameters necessarily indicate "certain properties" of said data. In Yates, III et al. the main goal of the method and apparatus recited is the correlation of a peptide fragment to a parent protein and the search of the transformed data in Yates, III et al. is performed to indicate the presence of a certain protein (Note Step 640).

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to David A. Vanore whose telephone number is (571) 272-2483. The examiner can normally be reached on M-F 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John R. Lee can be reached on (571) 272-2477. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

dav



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